

TMS 01 – L.J. MEDIUM SLANT

INTENDED USE

For cultivation of Mycobacterium tuberculosis.

PRODUCT SUMMARY AND EXPLANATION

L.J. Medium slant is used for isolation and cultivation of Mycobacterium species. It is prepared as per the Jensen's modification of the original formulation of Lowenstein. The Egg-based media contains whole egg or egg yolk, potato starch, salts and glycerol and are solidified by inspissation. These substances provide fatty acids and protein required for the metabolism of Mycobacteria.

COMPOSITION

| Ingredients | Gms / Ltr |
|--------------------------|-----------------|
| Potato starch | 30.000 |
| L-Asparagine | 3.600 |
| Potassium phosphate mono | 2.400 |
| Magnesium sulphate | 0.240 |
| Magnesium citrate | 0.600 |
| Malachite green | 0.400 |
| Glycerol | 12.00ml/600ml |
| Whole egg emulsion | 1000.00ml/600ml |

PRINCIPLE

The medium contains L-Asparagine and potato starch which acts as source of nitrogen and vitamins. Mono potassium phosphate and Magnesium sulphate enhances organism's growth and acts as buffers. Glycerol and egg suspension provide fatty acids and protein required for the metabolism of Mycobacteria. Malachite green serves as an inhibitor as well as pH indicator. Formation of blue zones indicates a decrease in pH by gram-positive contaminants (e.g. Streptococci) and yellow zones of dye destruction by gram-negative bacilli.

INSTRUCTION FOR USE

- 1. Inoculate either the sputum sample previously subjected to decontamination and concentration process or the pure culture of Mycobacteria isolated from a clinical sample on the surface of slants.
- 2. Incubate the slants at 35-37°C with 5-10% CO₂ and examine the slants every week up to 8 weeks.

QUALITY CONTROL SPECIFICATIONS

Appearance Pale bluish green coloured, opaque, smooth slants.

Sterility Check Passes release criteria

INTERPRETATION

Cultural characteristics observed after Incubation with 5-10% CO₂.

| Mic | roorganism | ATCC | Inoculum | Growth | Appearance of colony | Incubation Temperature | Incubation Period |
|-----|-------------------|-------|-----------------------|-----------|------------------------------------|---------------------------|----------------------|
| Myd | cobacterium ım | 25291 | Standardized inoculum | Luxuriant | Smooth, non- pigmented colonies | 35-37°C | 2-4 weeks |











| Mycobacterium gordonae | 14470 | giving approximately | Luxuriant | Smooth, yellowish orange colonies | 35-37°C | 2-4 weeks |
|-------------------------------------|-------|----------------------|----------------------------------|---|-----------|-----------|
| Mycobacterium tuberculosis H37RV | 25618 | 1000000 cfu/ml | Luxuriant | Granular, rough, worty, dry, friable colonies | 35-37°C | 2-4 weeks |
| Mycobacterium kansasii | 12478 | | Luxuriant | Smooth-rough, photochromogenic colonies | 35-37°C | 2-4 weeks |
| Mycobacterium smegmatis | 14468 | Luxuriant | Wrinkled, creamy white colonies. | 35-37°C | 2-4 weeks | |

PACKAGING:

In pack size of 1 kit containing 10 slants.

STORAGE

On receipt, store vials in the dark at 2-8° C. Avoid freezing and overheating. The medium may be used up to the expiration date and incubated for the recommended incubation times. Vials from unopened packages can be used up to the expiration date. Opened vials must be used immediately.

Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, or any other signs of deterioration.

DISPOSAL

After use, prepared media, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

- 1. Murray P. R., Baron E. J., Jorgensen J. H., Pfaller M. A., Yolken R. H., (Eds.), 8th Ed., Manual of Clinical Microbiology, ASM, Washington, D.C. (2003).
- 2. Lowenstein E., Zentralbl. Bakteriol. Parasitenkd. Infektionskr. Hyg. Abt. 1 Orig., 120:127. (1931).
- 3. Jensen K. A., Zentralb. Bakteriol. Parasitenkd. Infektionskr. Hyg. Abt. I Orig., 125:222. (1931).
- 4. Gruft, 1971, Health Lab. Sci., 8:79. (1932).
- 5. Gruft, Am. Rev. Respir. Dis., 88:412. (1963).
- 6. MacFaddin J. F., Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore. (1985).
- 7. Forbes B. A., Sahm A. S. and Weissfeld D. F., Bailey & Scotts Diagnostic Microbiology, 10th Ed., Mosby, Inc., St. Louis, Mo. (1998).
- 8. Cernoch P., Enns R., Saubolle M. and Wallace R., Cumitech, 16A, Laboratory Diagnosis of the Mycobacterioses coord, Ed., Weissfeld, ASM, Washington, D. C. (1994).
- 9. Isenberg, (Ed.), Clinical Microbiology Procedures Handbook, Vol. I, ASM, Washington, D. C. (1992)

























NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only

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